

**CLAIMS**

1. A purifier for use in a gas processing application, the purifier  
5 comprising a chamber having a gas inlet and a gas outlet, a series of baffles arranged in the chamber and coated with a getter material selected for its ability to react with species to be removed from a gas stream and form stable compounds, a source of the getter material provided within the chamber, and means for activating the source to  
10 refresh the coating of getter material on the baffles.
2. A purifier according to Claim 1, wherein the means for activating the source comprises means for vaporising the source of getter material.
- 15 3. A purifier according to Claim 2, wherein the vaporising means is arranged to produce an electric arc between the source and a collector.
4. A purifier according to Claim 3, wherein the collector extends about  
20 the source.
5. A purifier according to Claim 3 or Claim 4, wherein the collector comprises at least part of the inner wall of the chamber.
- 25 6. A purifier according to any preceding claim, wherein the source comprises a rod of getter material, the baffles being arranged about and along the rod.
7. A purifier according to Claim 6, wherein the rod extends longitudinally  
30 through the chamber.

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8. A purifier according to Claim 7, wherein the rod is substantially co-axial with the chamber.
9. A purifier according to any preceding claim, comprising means for  
5 controlling the activation of the activation means.
10. A purifier according to Claim 9, wherein the control means is configured to activate the activation means at predefined time intervals.
- 10 11. A purifier according to Claim 10, wherein the control means comprises at least one sensor for monitoring an environment within or outside of the chamber and for activating the activation means when a predefined change in the monitored environment is detected.
- 15 12. A purifier according to Claim 11, wherein said at least one sensor is located within the chamber.
13. A purifier according to any preceding claim, wherein the baffles are  
20 configured and/or arranged so as to create a convoluted path for gas flowing through the chamber.
14. A purifier according to any preceding claim, wherein the getter material is selected from; Ti, Ta and Zr, and alloys thereof.
- 25 15. A purifier according to any of Claims 1 to 13, wherein the getter material is selected from; Fe and Cr, and alloys thereof.
- 30 16. A semiconductor processing system comprising a process chamber for receiving a process gas, and a purifier according to any preceding claim for purifying the process gas upstream from the process chamber